

# Binge Drinking and Pregnancy Intention

2001-2002 Michigan Pregnancy Risk Assessment  
Monitoring Survey (PRAMS)

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## Binge Drinking

- Defined as having 5 or more drinks during one sitting
- Linked to several adverse outcomes for both women and children including
  - Intentional and unintentional injuries, unplanned sexual intercourse, and sexually transmitted disease
- Most prevalent among persons in their late teens/early 20's
- Has been increasing in prevalence in recent years
- Exposure to alcohol in the prenatal period has been linked with miscarriage, mental retardation, and other preventable birth defects



## Unintended Pregnancy

- Over 40% of pregnancies are unintended
- Unintended pregnancy is associated with undesirable outcomes including:
  - Late entry into prenatal care
  - Low birthweight
  - Poor childhood development



## Objective

- Describe the profile of women who binge drank during the preconceptional period.
- Explore the association between pregnancy intention and binge drinking prior to pregnancy.



## Methods (1)

- Utilized data from July 2001-December 2002 PRAMS, which is a population-based survey of maternal behaviors and experiences prior to and during a woman's pregnancy, as well as during early infancy of her child
- Used the following questions:
  - During the 3 months before you got pregnant, how many alcoholic drinks did you have in an average week?
  - During the 3 months before you got pregnant, how many times did you drink 5 alcoholic drinks or more in one sitting?
  - Thinking back to just before you got pregnant, how did you feel about becoming pregnant?

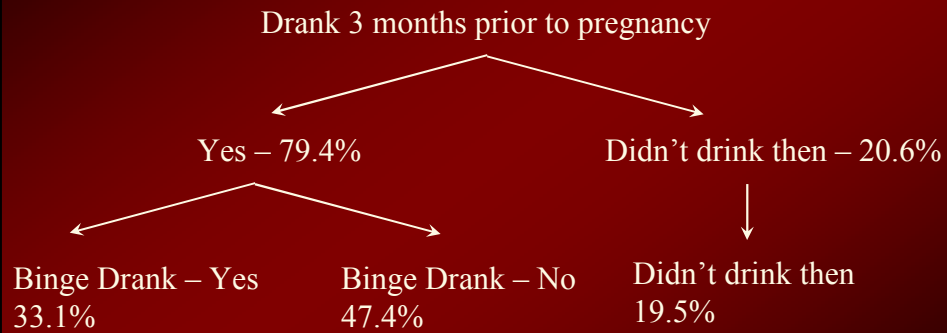


## Methods (2)

- Exploratory data analysis (univariate and bivariate analysis)
- Logistic regression models were developed to explore the association between preconceptional binge drinking and unintended pregnancy
- SUDAAN 9.0 software was used

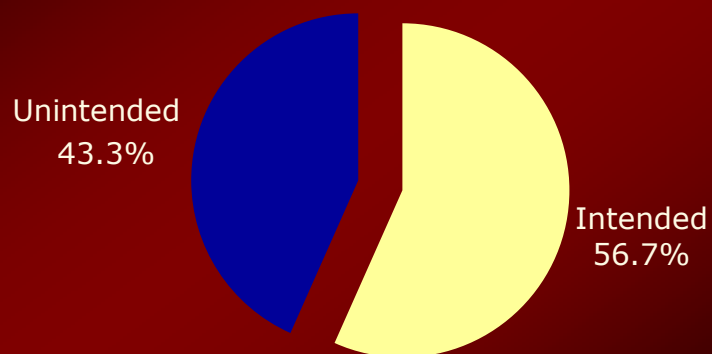


## Prevalence of Drinking Prior to Pregnancy

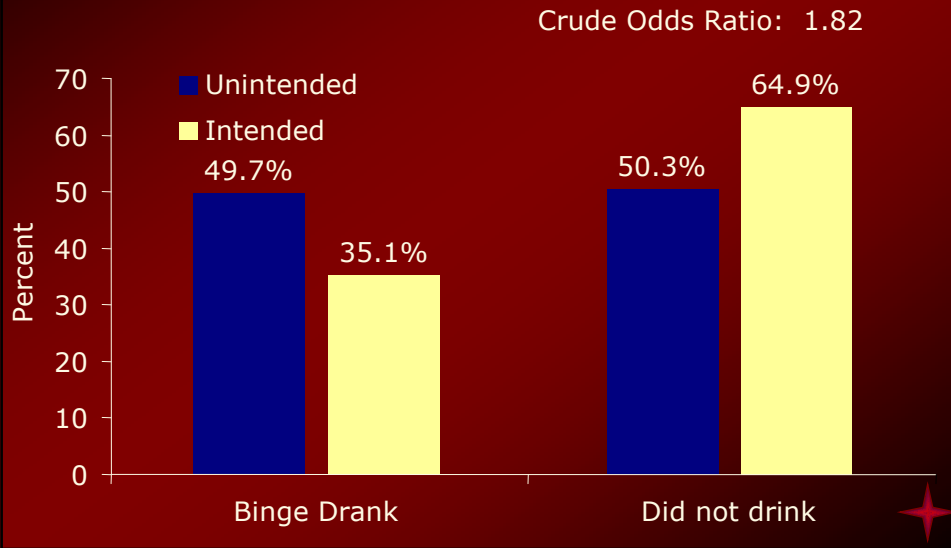


Cases: Women who reported binge drinking (441 women)  
Controls: Women who reported 'didn't drink then' in both the three months prior to pregnancy question and the binge drinking question (268 women)

## Prevalence of Pregnancy Intention In Michigan



## Prevalence of Preconceptional Binge Drinking by Pregnancy Intention



## Statistical Methods

- Variables in *initial* model
  - Pregnancy intention
  - Maternal race
  - Marital status
  - Contraceptive use
  - Maternal age
  - Maternal education
  - Smoking status
  - Prenatal care start
  - Birthweight
  - Income
  - Gestational Age
  - Medicaid Status
- Variables in *final* model
  - Pregnancy intention
  - Maternal race
  - Maternal age
  - Smoking status
  - Prenatal care start
  - Medicaid Status
  - Marital Status

# Logistic Regression Results

Characteristics		Odds Ratio	95% Confidence Interval
Intended	No	<b>2.00</b>	<b>(1.31, 3.04)</b>
	Yes	1.00	
Age	<25	1.00	
	<b>25+</b>	<b>1.90</b>	<b>(1.22, 2.96)</b>
Marital Status	Married	0.78	(0.46, 1.33)
	Other	1.00	
Smoke	Yes	<b>2.25</b>	<b>(1.35, 3.74)</b>
	No	1.00	
Race	White	<b>3.20</b>	<b>(1.70, 6.04)</b>
	Black	1.00	
Medicaid Status	Ever	1.14	(0.69, 1.87)
	Never	1.00	
Prenatal Care Start	After 1st trimester/	0.72	(0.43, 1.20)
	Never 1st trimester	1.00	



## Conclusions

- Unintended pregnancy as well as older women (>25 years), white women and smoking, were significantly associated with binge drinking
- Also, since over 40% of unintended pregnancies end in abortions, these findings likely an underestimate



## **Limitations**

- Misclassification due to recall bias
- Validity of current questions in detection of intent
- Small sample size when stratified for statistical analysis
- PRAMS data represents only women who had a live-birth, and does not include women who had abortions or fetal deaths



## **Public Health Implications**

- Promote education about alcohol exposure to women of child bearing age especially to those who consider pregnancy
- Assure that prenatal providers discuss the negative effects alcohol consumption has on a developing fetus
- Develop follow-up procedures for children exposed to alcohol during the prenatal period.



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**Questions????**

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